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**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/21/02 & **11/19/02**.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1, 3, 5, 8 & 11.

Claims 21-27 are allowed.

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Claims 4, 6-7, 9-10 & 12-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 2 is been canceled.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Claims 9-10, 12-13, 16, 23-24 & 26-27 were rejected under 35 USC 112, second paragraph; this rejection is now withdrawn. Claims 1, 3, 5, 8 & 11 are rejected under 35 USC 103(a) as obvious over Nagarajan et al. (US Pat. 5,824,992).

**(7) Grouping of Claims**

The rejection of claims 1, 3, 5, 8 & 11 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

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**(8) Claims Appealed**

A substantially correct copy of appealed claims 1, 3, 5, 8 & 11 appears on pages 14-15 of the Appendix to the appellant's brief. The minor errors are as follows: the rejection of claims 9-10, 12-13, 16, 23-24 & 26-27 under 35 USC 112 2nd paragraph has been withdrawn.

**(9) Prior Art of Record**

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,824,992

Nagarajan et al.

10-20-1998

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 8 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. (US Pat. 5,824,992).

Nagarajan et al. discloses a metal core weld wire in which the core composition includes iron powder usually as a filler material and the core composition contains between approximately 13 to 45% of the total wire weight (abstract, col. 1, lines 15-25). The steel sheath includes about 0.005 to 0.15% carbon and 0.1 to 1.1% Mn (col. 4, lines 25-35). Additionally, the total wire contains 0.005 to 0.150% carbon (col. 4, lines

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5-14). The metal core composition contains 0.1 to 2.5% Mn, 0.2 to 10.0% Fe, 0.2 to 2.0% Si and 0.001 to 0.100% Ti (col. 4, lines 20-25).

Nagarajan et al. teaches a carbon content as low as 0.005%, although not 0.0046 or 0.0047% and additionally, does not disclose the exact same composition as instant claims.

The exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; however, the prior art compositions closely approximate or overlap applicant's claimed composition. It has been held that one of ordinary skill in the art at the time of the invention would have considered the claimed compositions to have been obvious because close approximation or overlapping ranges in a composition is considered a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, Titanium Metals v. Banner 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

Although Nagarajan et al. does not teach reduced fume generation, it does teach the same metal core weld wire composition and sheath composition as instant claims. If a composition is physically the same, it must have the same properties. A chemical composition and its properties are inseparable. Therefore, the prior art teaches the same chemical composition, the properties of instant claims are necessarily inherent and present. See In re Spada, 15 USPQ 2d, 1655, 1658.

**(11) Response to Argument**

Applicant arguments with respect to the 35 USC 112 2nd paragraph rejections (claims 9-10, 12-13, 16, 23-24 & 26-27) are moot in view of the withdrawal of the rejection.

Applicant argues that the carbon content in the sheath in claim 1 is less than 0.005% and therefore is not the same as the prior art. The examiner respectfully disagrees because the prior art, Nagarajan et al.,

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states a range of 0.005 to 0.150% carbon which closely approximates the instant claim content of less than 0.005% carbon. Applicant only states that the carbon content is less than 0.005%; what is the definition of less is, is not revealed. Thus, the prior art composition of 0.005% to 0.150% carbon is closely approximating to instant claims and held obvious. See In re Malagari. Additionally, applicant argues that the prior art does not disclose reduction of fume generation. The examiner respectfully notes that when compositions are essentially the same, the properties will be the same. See In re Spada. Although the prior art is silent with respect to the reduction of fumes, the fact that the composition is essentially the same, the fume reduction property is inherent and present.

Applicant states that claim 3 recites "... the total weight of the metal-core weld wire comprises between approximately 0.005% C and approximately 0.013% C". The examiner respectfully disagrees with applicant's statement because these carbon amounts are directed to different articles. The 0.005% carbon amount is carbon in the sheath (see claim 1) while the 0.013% carbon is directed to the total content of the wire (see claim 3). Therefore a range has not been defined as asserted by the applicant. Additionally, applicant states that the examiner failed to consider the limitations of claim 3, concerning the carbon content of the weld wire core composition rather than the carbon content of the sheath. The examiner respectfully disagrees because the prior art rejection stated: "...The steel sheath includes about 0.005 to 0.15% carbon and 0.1 to 1.1% Mn (col. 4, lines 25-35). Additionally, the total wire contains 0.005 to 0.150% carbon (col. 4, lines 5-14)....". Consequently, the carbon content in the sheath and the core weld wire have been fully considered.

Applicant argues that the prior art, Nagarajan et al., does not disclose a steel sheath that "...comprises between approximately 0.35% Mn and approximately 0.45% Mn..." as stated in claim 5. The examiner

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respectfully disagrees because: "... The steel sheath includes about 0.005 to 0.15% carbon and 0.1 to 1.1% Mn (col. 4, lines 25-35)....". Although, the exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; the prior art compositions overlap applicant's claimed composition. It has been held that one of ordinary skill in the art at the time of the invention would have considered the claimed compositions to have been obvious because overlapping ranges in a composition is considered a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, Titanium Metals v. Banner 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

Regarding claim 8, applicant argues that Nagarajan et al. does not disclose a "... metal-core composition comprising not more than approximately 0.0047% C...". Furthermore, applicant states that the examiner fails to consider the limitations of claim 8 drawn to the carbon content in the wire rather than the sheath. The examiner respectfully disagrees because the rejection states the amounts of carbon for both the sheath and the wire: "... The steel sheath includes about 0.005 to 0.15% carbon and 0.1 to 1.1% Mn (col. 4, lines 25-35). Additionally, the total wire contains 0.005 to 0.150% carbon (col. 4, lines 5-14)....". Thus, the carbon content of the sheath and wire were both taken into consideration. In addition, the exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; however, the prior art compositions closely approximate applicant's claimed composition. It has been held that one of ordinary skill in the art at the time of the invention would have considered the claimed compositions to have been obvious because close approximation ranges in a composition is considered a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, Titanium Metals v. Banner 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

Applicant argues that regarding claim 11, Nagarajan et al. does not disclose a metal-core composition between approximately 17% and 19% of the total weight of the wire and the metal-core composition

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comprising not more than approximately 0.0046% carbon in combination with the limitations of claim 1. The examiner respectfully disagrees because Nagarajan et al. discloses: "...a metal core weld wire in which the core composition includes iron powder usually as a filler material and the core composition contains between approximately 13 to 45% of the total wire weight (abstract, col. 1, lines 15-25). The steel sheath includes about 0.005 to 0.15% carbon and 0.1 to 1.1% Mn (col. 4, lines 25-35). Additionally, the total wire contains 0.005 to 0.150% carbon (col. 4, lines 5-14)....". The core composition of between 13 to 45% overlaps instant claim limitation of 17 to 19%. See In re Malagari. In addition the carbon content of the core has a lower range of 0.005% carbon which closely approximates instant claim. In addition, the exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; however, the prior art compositions closely approximate applicant's claimed composition. It has been held that one of ordinary skill in the art at the time of the invention would have considered the claimed compositions to have been obvious because close approximation ranges in a composition is considered a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, Titanium Metals v. Banner 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

The affidavit under 37 CFR 1.132 filed 9/6/2001 is insufficient to overcome the rejection of claims 1, 3, 5, 8 & 11 based upon Nagarajan et al. as set forth in the last Office action because: Applicant states that the metal-core wires as cited in the claims "have been commercially successful since being introduced into the market and that sales are growing substantially...". Additionally, the metal-core wires "... have substantially displaced the use of flux core weld wires by some customers...". Applicant has not provided any data to substantiate success of the weld wires. There is no data presented with respect to market share. It is not known if increased sales are due to just a general increase in sales in the market or if the increase was just

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due to the introduction of the weld wires. Furthermore, it is not known if the increase in sales are due to a technical improvement or due to improved marketing, sales incentive or pricing.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

M. Alexandra Elve

Primary Examiner 1725

December 6, 2001

Conferees

Patrick Ryan

Tom Dunn